The background image is a landscape photograph showing a dry, hilly region. In the foreground, there is a field of tall, dry grass. The middle ground features rolling hills with sparse vegetation and a winding river or stream. In the background, there are large, rugged mountains under a cloudy sky.

# Lord of the Flies or Neverland? Testing the efficacy of ‘Restoration Islands’ in southern California shrublands

Shane Dewees

Cal IPC 2025

11/14/2025



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# Land Acknowledgement




**THE FERNANDEÑO TATAVÍAM  
BAND OF MISSION INDIANS**

## THE DISTINCT COMMUNITY

of the present-day Fernandeno Tataviam Band of Mission Indians ("the Tribe") originated in the lineages, villages and cultures of the period preceding the establishment of Mission San Fernando ("Mission SFR"), from which the natives received the name Fernandeno.

Mission San Fernando was established on September 8, 1797 at the village of Acholcominga and, for years following, enslaved Native Americans from the lineages in the geographically surrounding areas, ranging from present-day Simi Valley, San Fernando Valley, Santa Clarita Valley, and Antelope Valley.

The Tribe uses Fernandeno as an all-encompassing term to represent the native people of diverse territories who were forced into indentured servitude by Mission SFR during the Spanish period. The distinct regional groups associated with Mission SFR are the Tataviam, Kaivitam, Sivavitam, Mohineyam, Chumash, Atsokajam, Amutskajam, Pipimaram, and Akwakwajam.







# Ecological Restoration

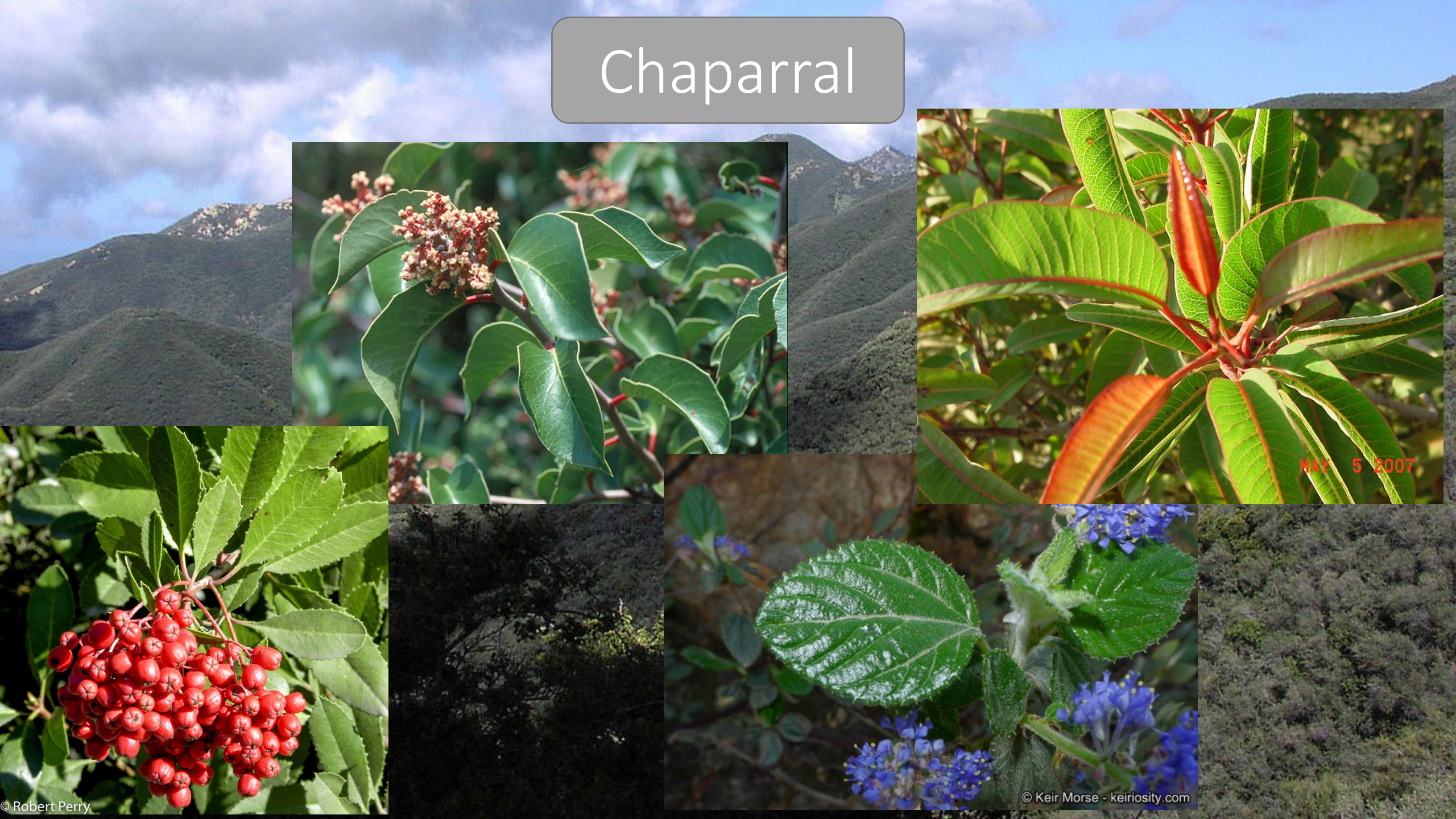
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Ecological restoration is the process of assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed.





# Chaparral



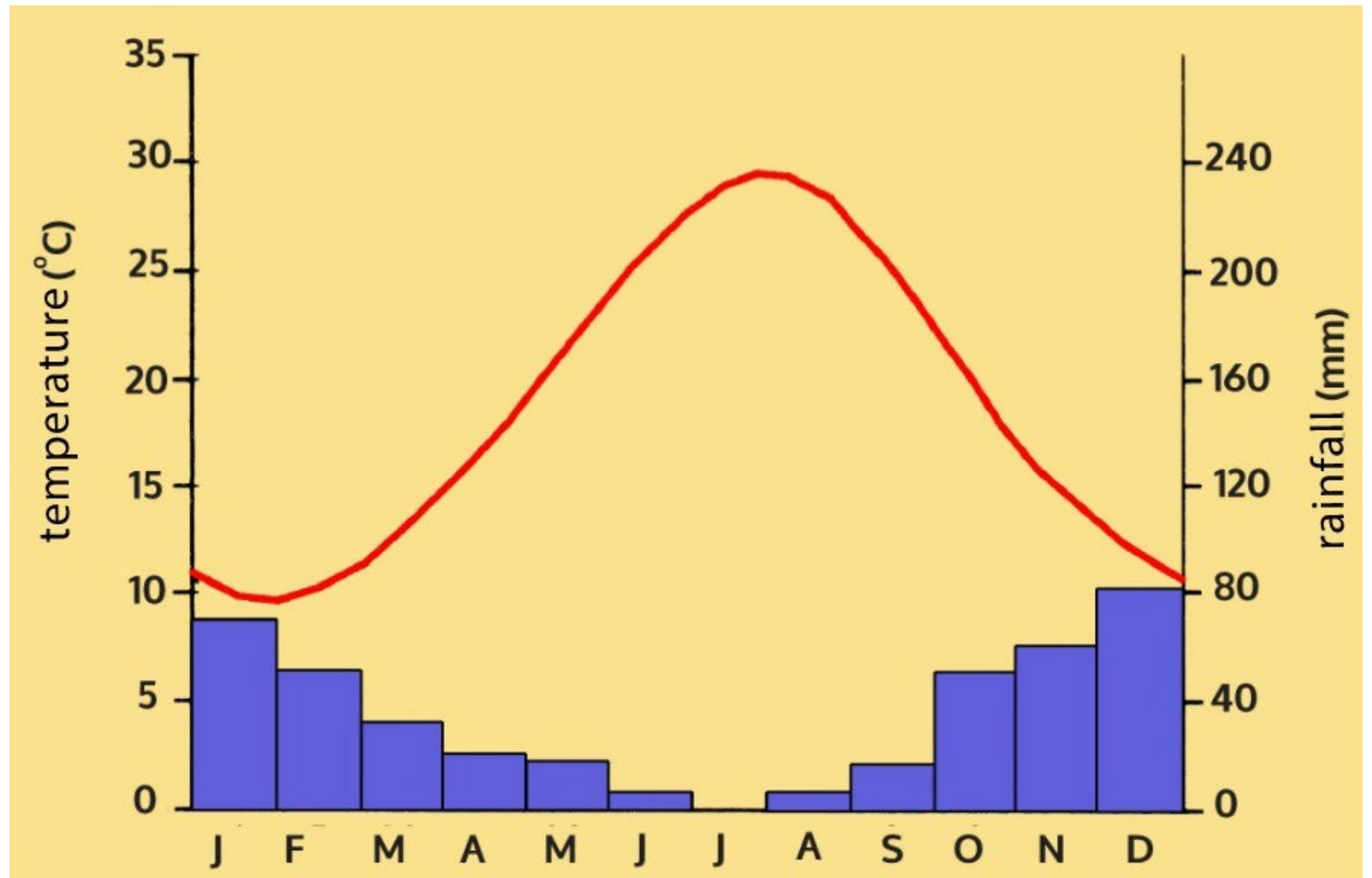


# Sage Scrub



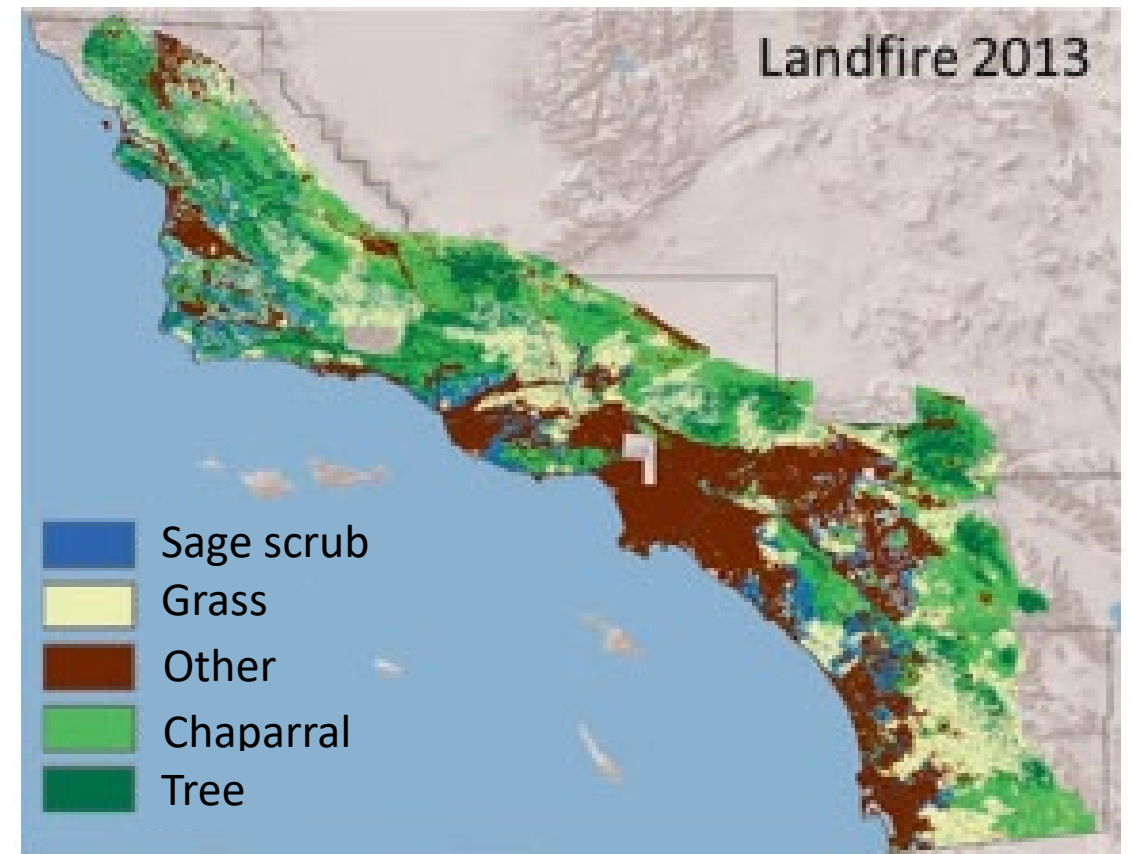
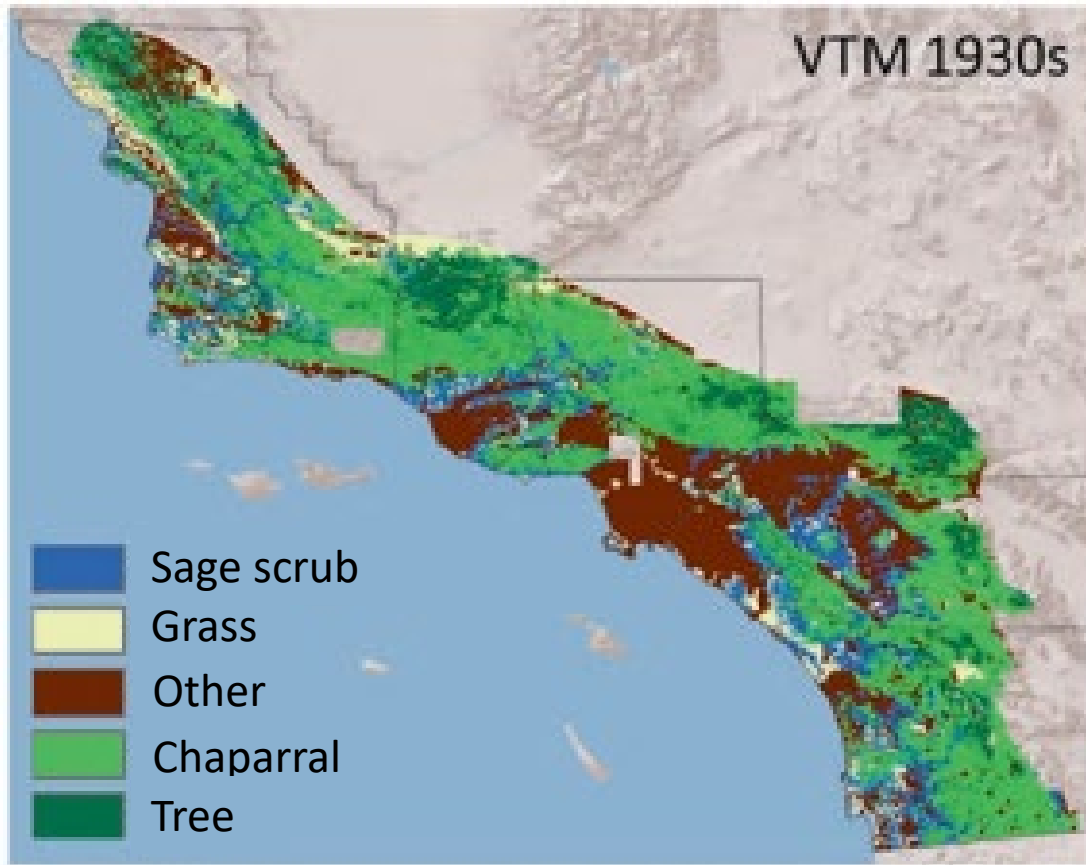


## Mediterranean Climate

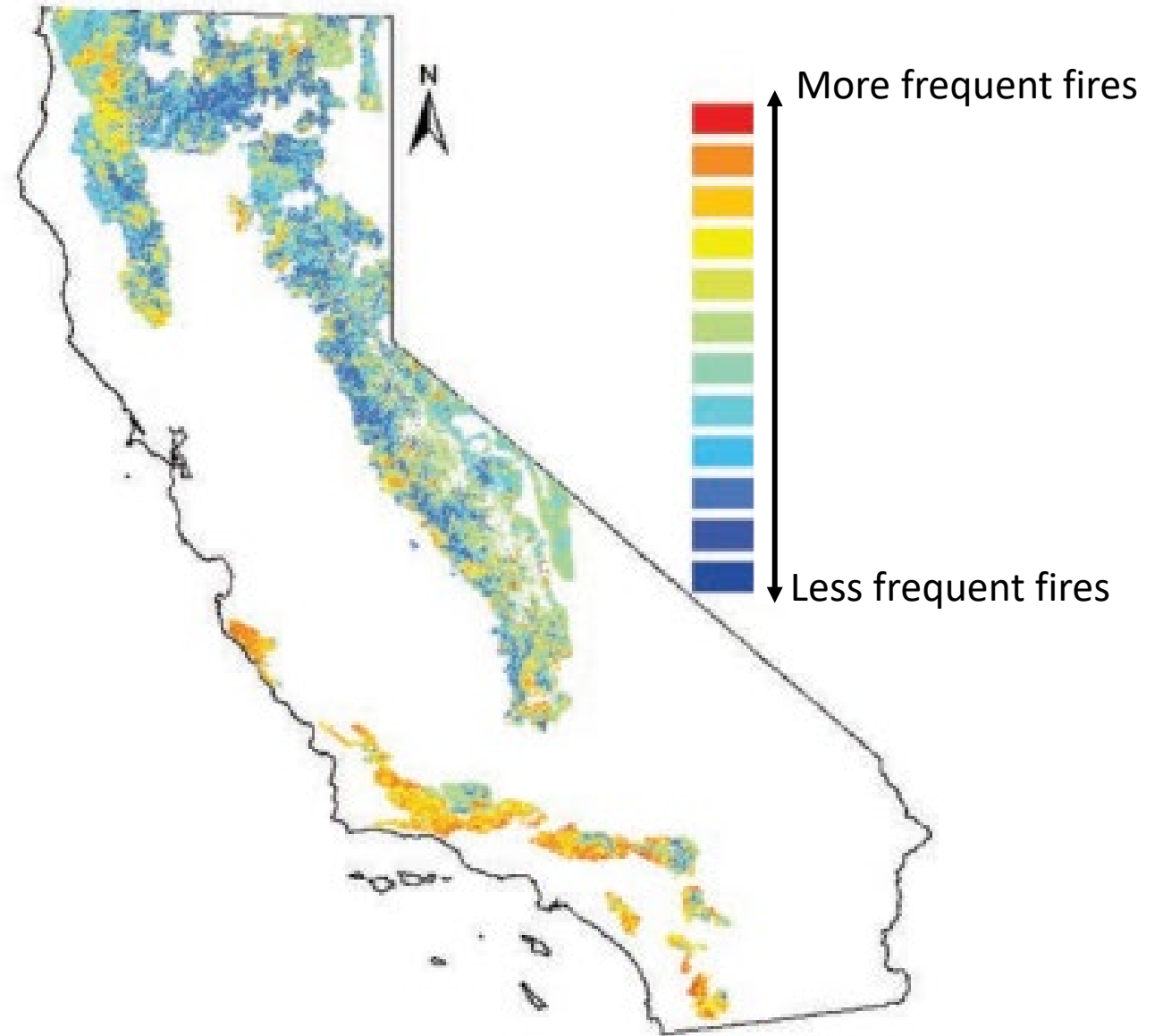




# Extensive habitat loss over the last century



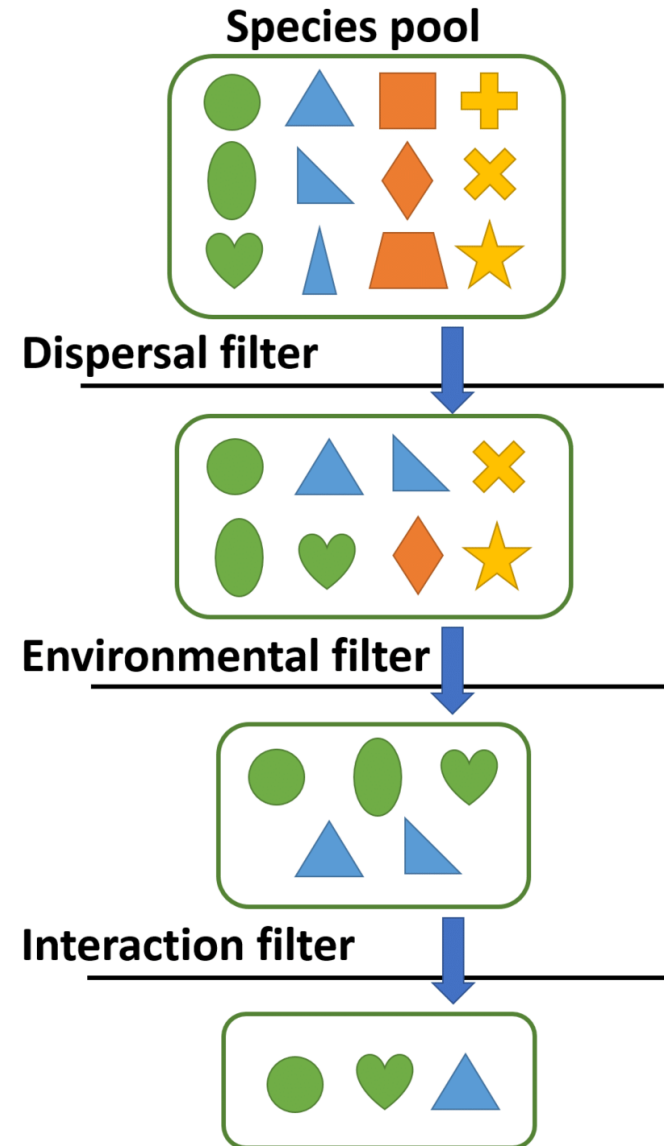
Much more  
frequent  
fires in  
southern  
California



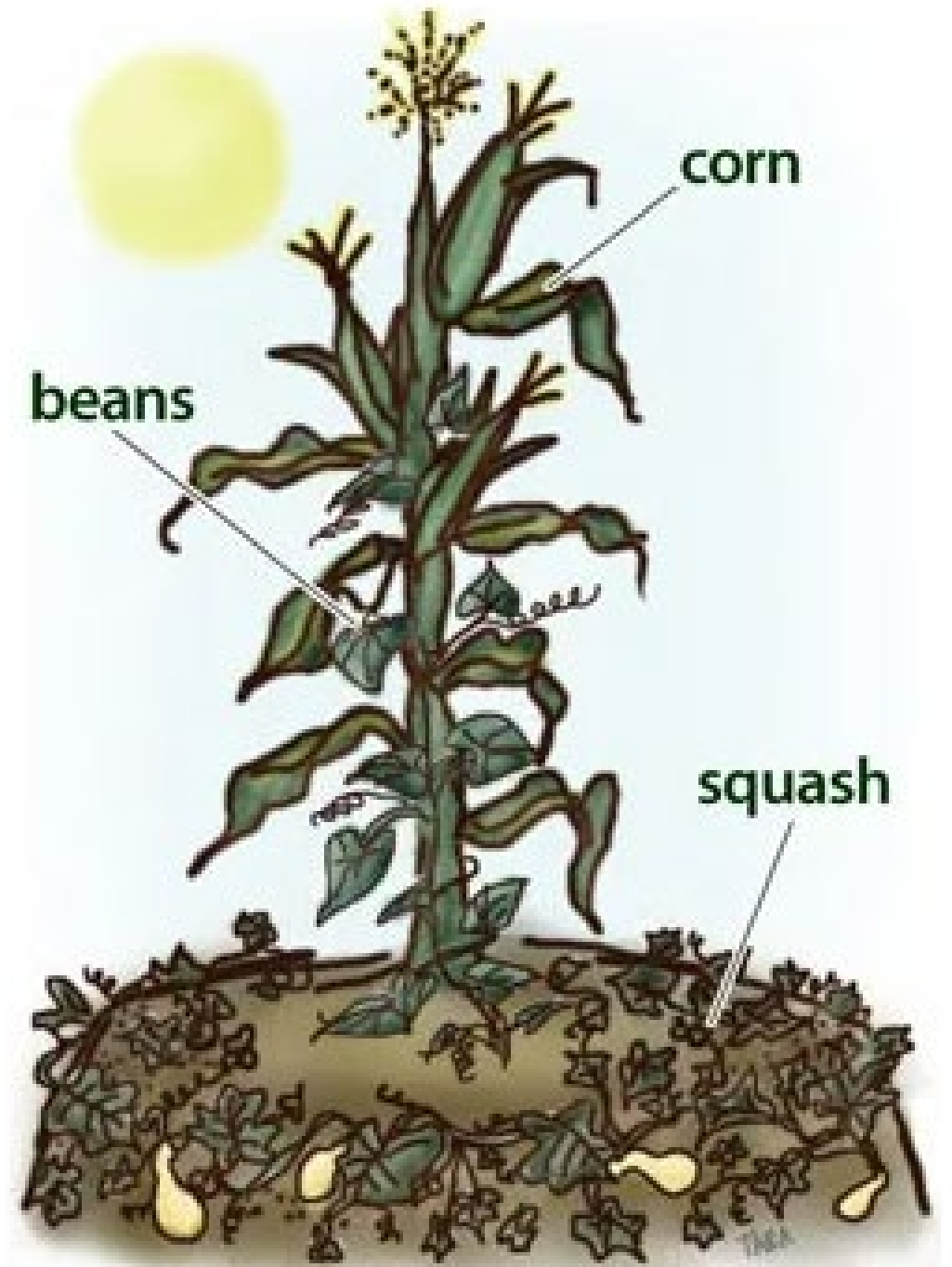
Safford and Van de Water 2014



# Traditional Competition Theory

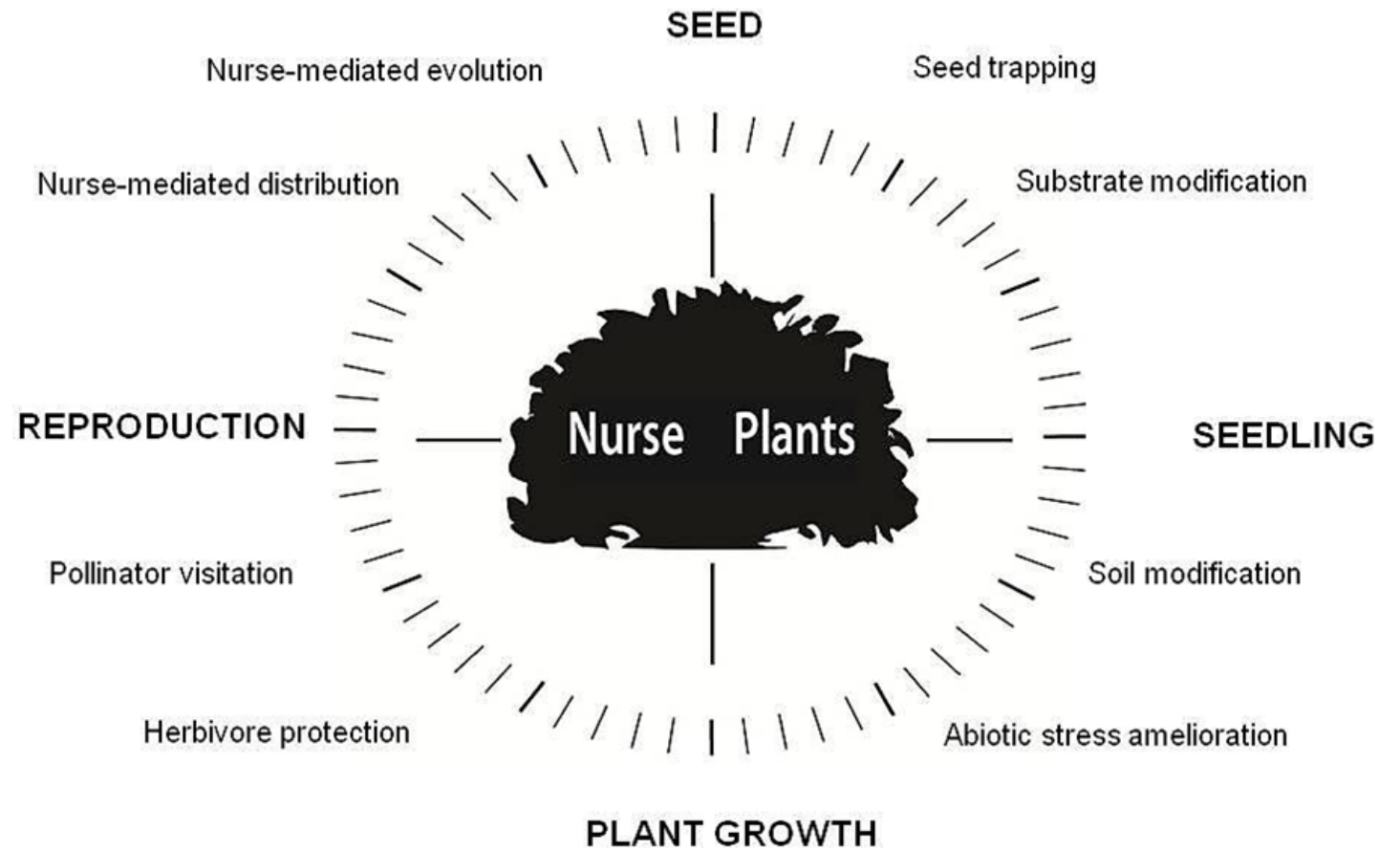


# The Three Sisters





# Incorporating facilitation



Filazzola, 2013

# Nucleation

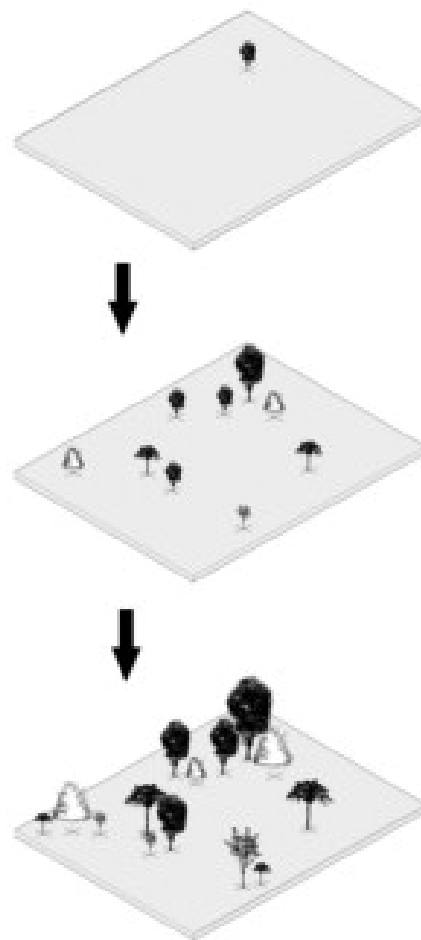


Ademir  
Reis



Karen Holl

## Passive Restoration



Corbin & Holl, 2012





Lord of the  
Flies or  
Neverland?





# Understanding Biotic Interactions

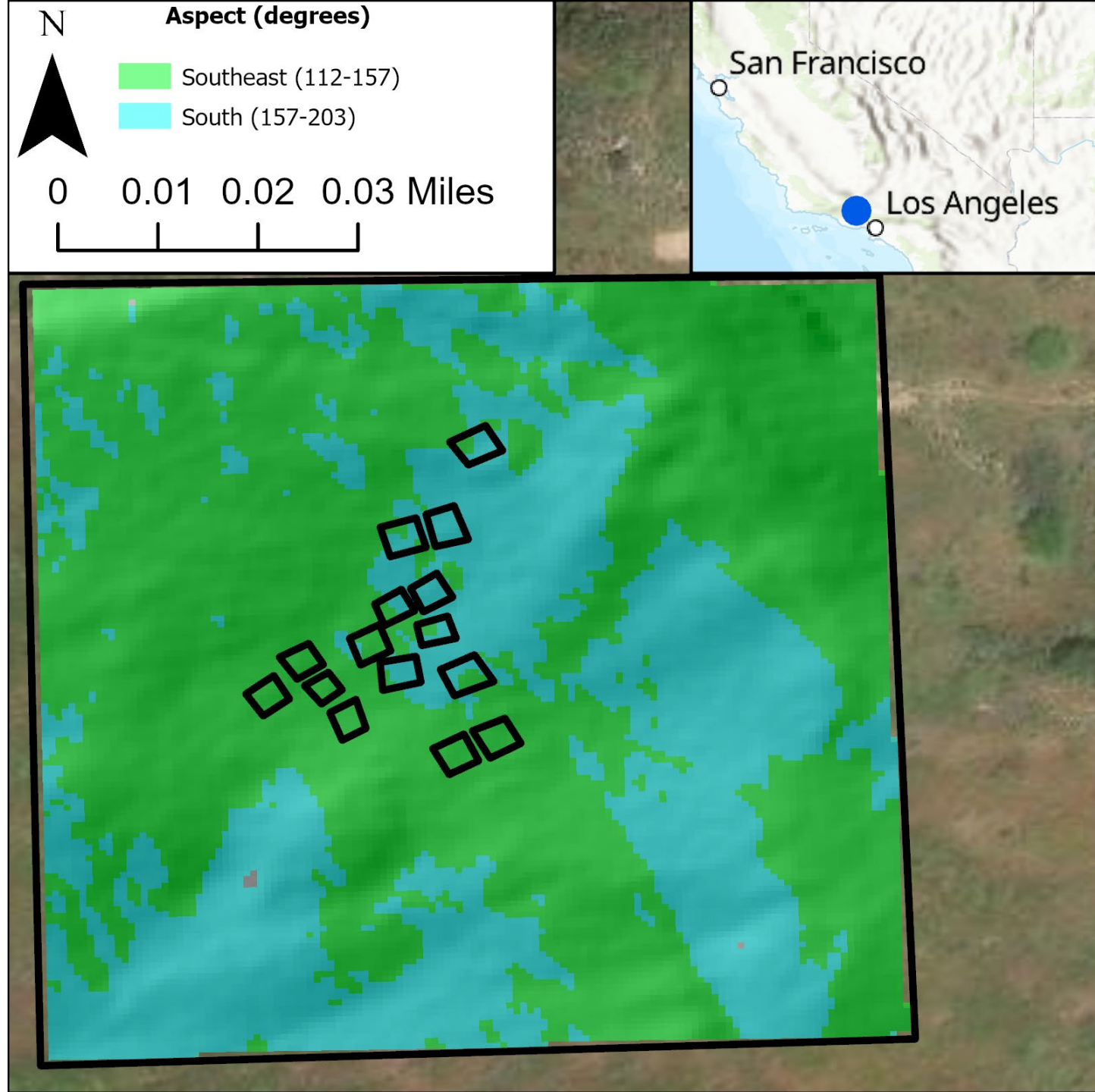
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- **Does increasing native shrub density facilitate the survival of other seedlings?**
  - Plot level survival will increase with higher planting densities.

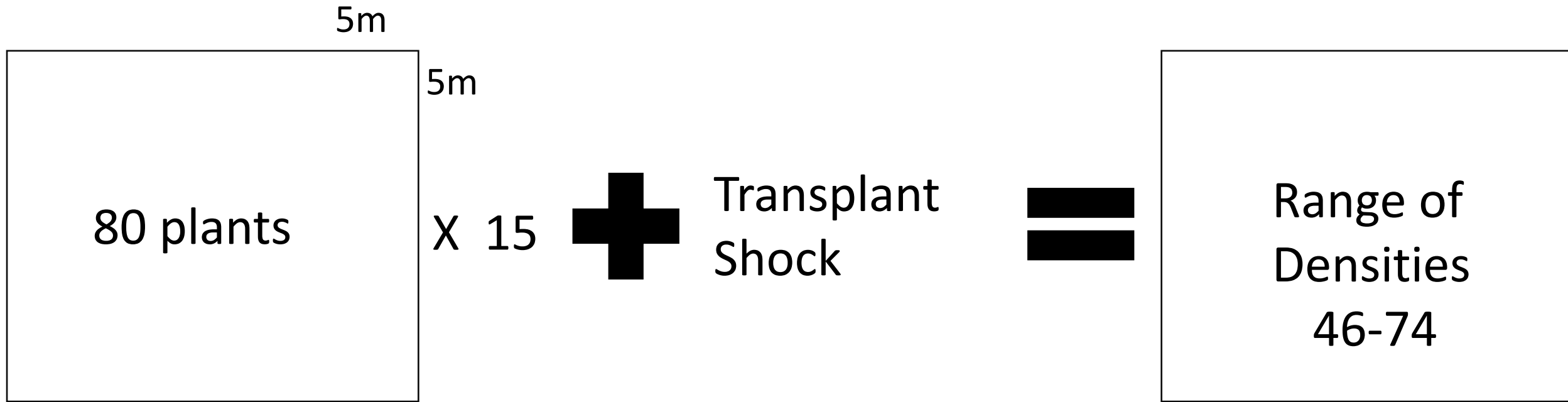


# Study Site: Piru, Ca

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# Methods: Experimental Design



## Monthly Measurements:

- Survival
- Soil moisture (5 random locations per plot)
- Ambient and plot sun exposure (5 random locations per plot)





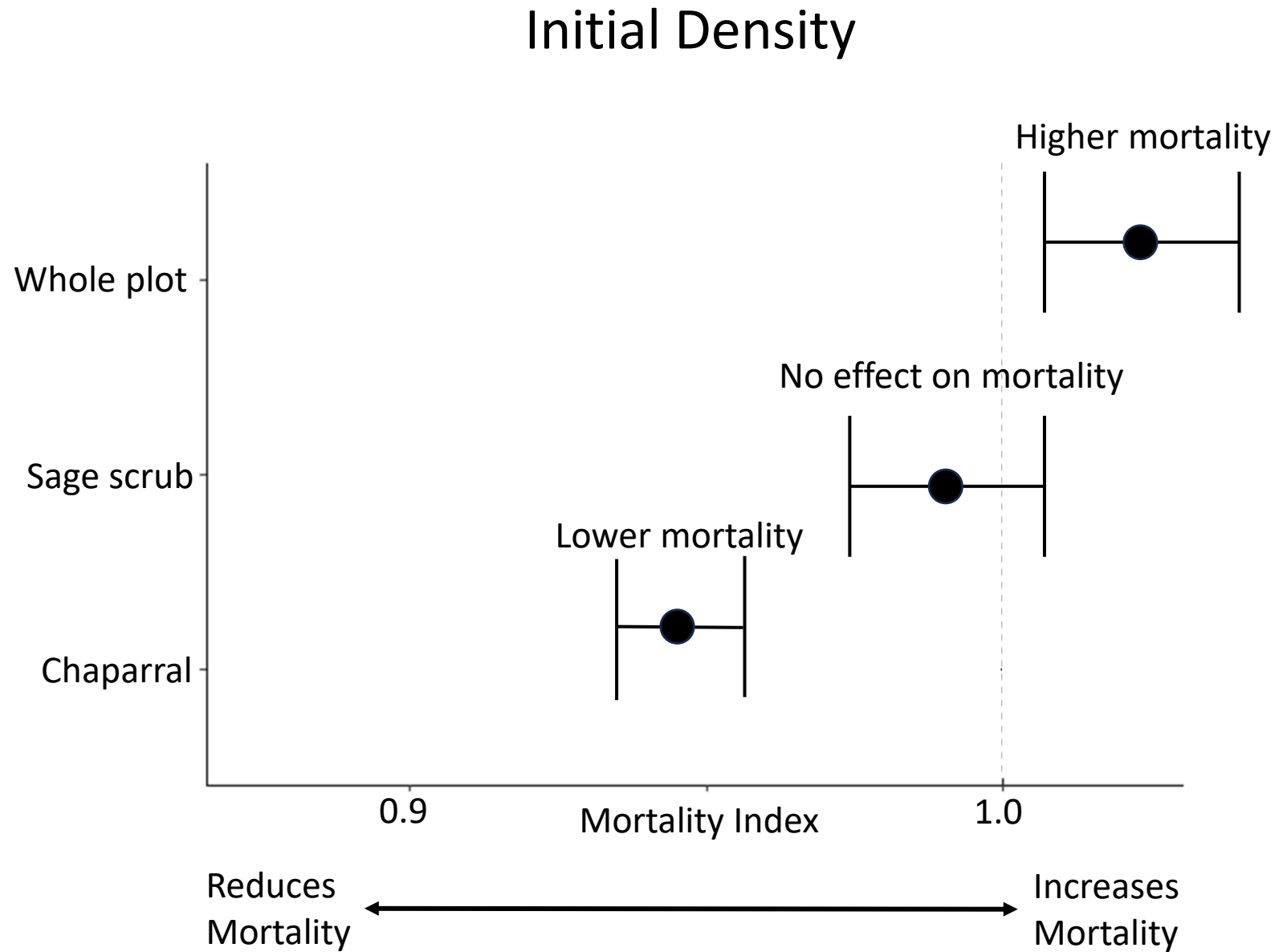






Better  
Survival with  
Higher Initial  
Density

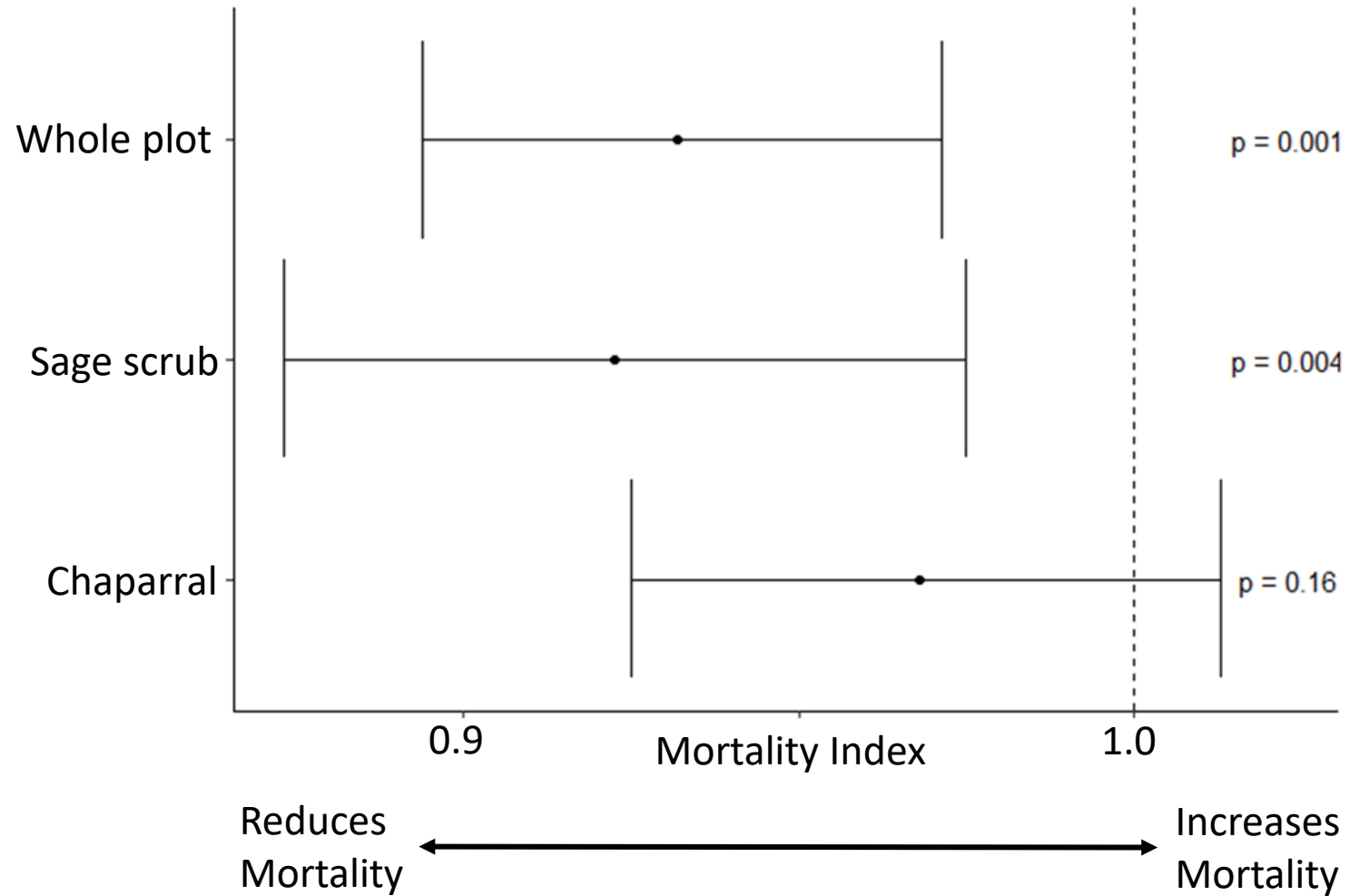
Cox proportional hazards model  
Plot as random intercept



Better  
Survival with  
Higher Initial  
Density

Cox proportional hazards model  
Plot as random intercept

## Initial Density





# Including Environmental Conditions

## Whole Plot







Look at my  
Pretty  
Plants







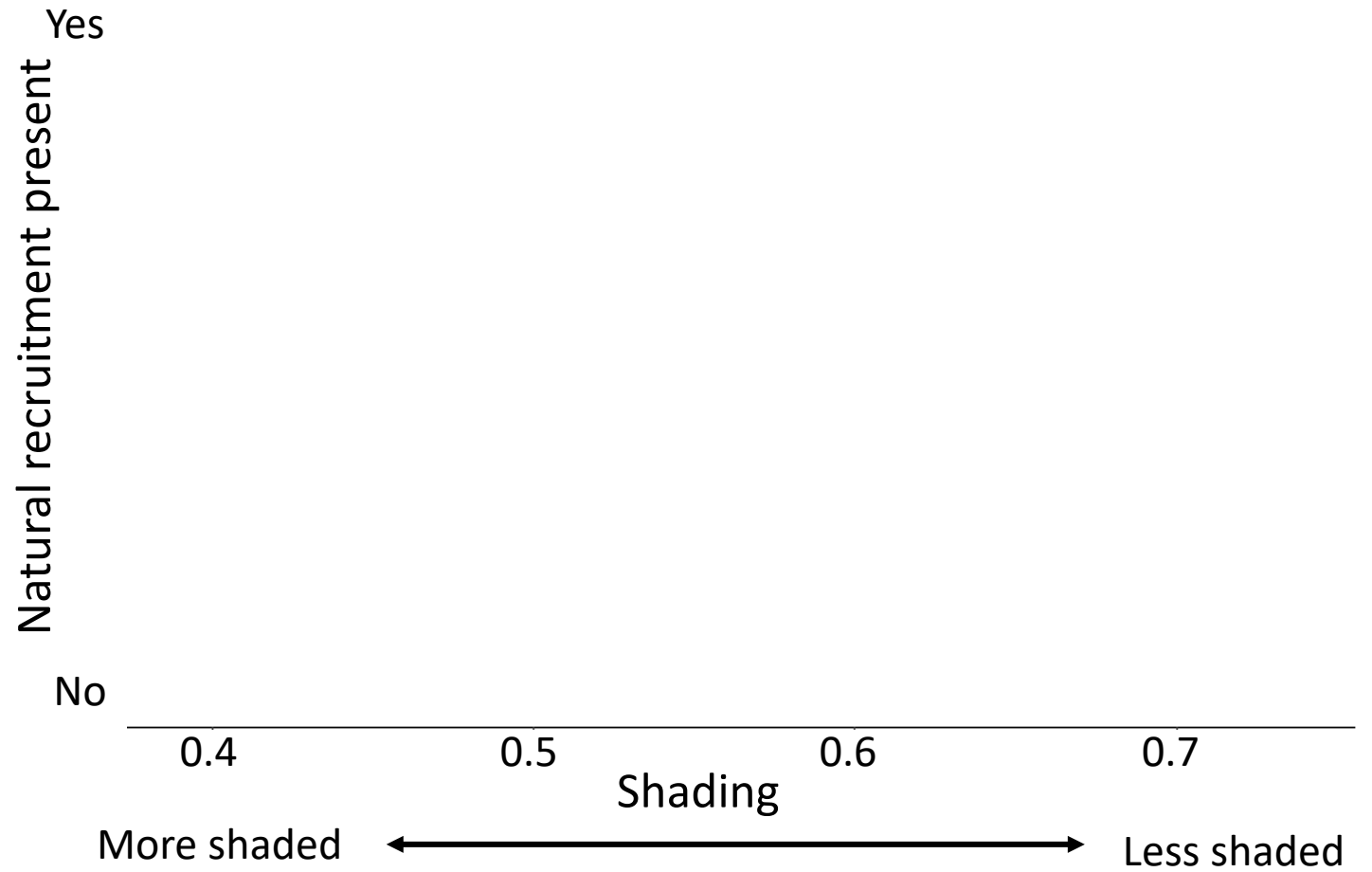
# Understanding Biotic Interactions

---

- **Does increasing native shrub density facilitate the survival of other seedlings?**
  - Consistent benefit of planting density
- **Does higher native cover enable natural regeneration?**
  - Higher native cover facilitates natural germination and survival
  - Higher native cover excludes non-native grasses

Seedling  
recruitment  
correlates to  
shading, but  
not soil  
moisture

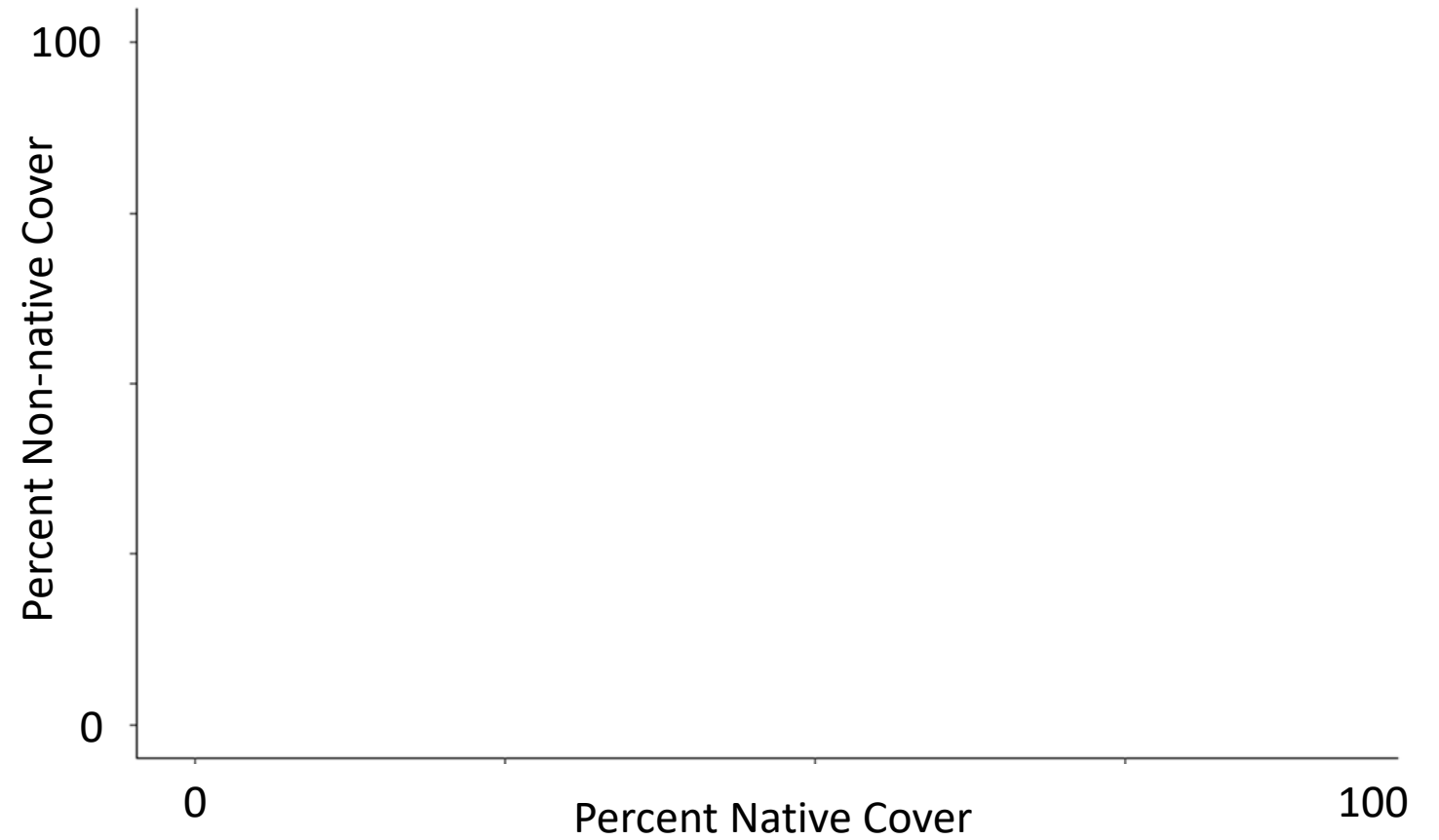
Generalized linear model  
binomial





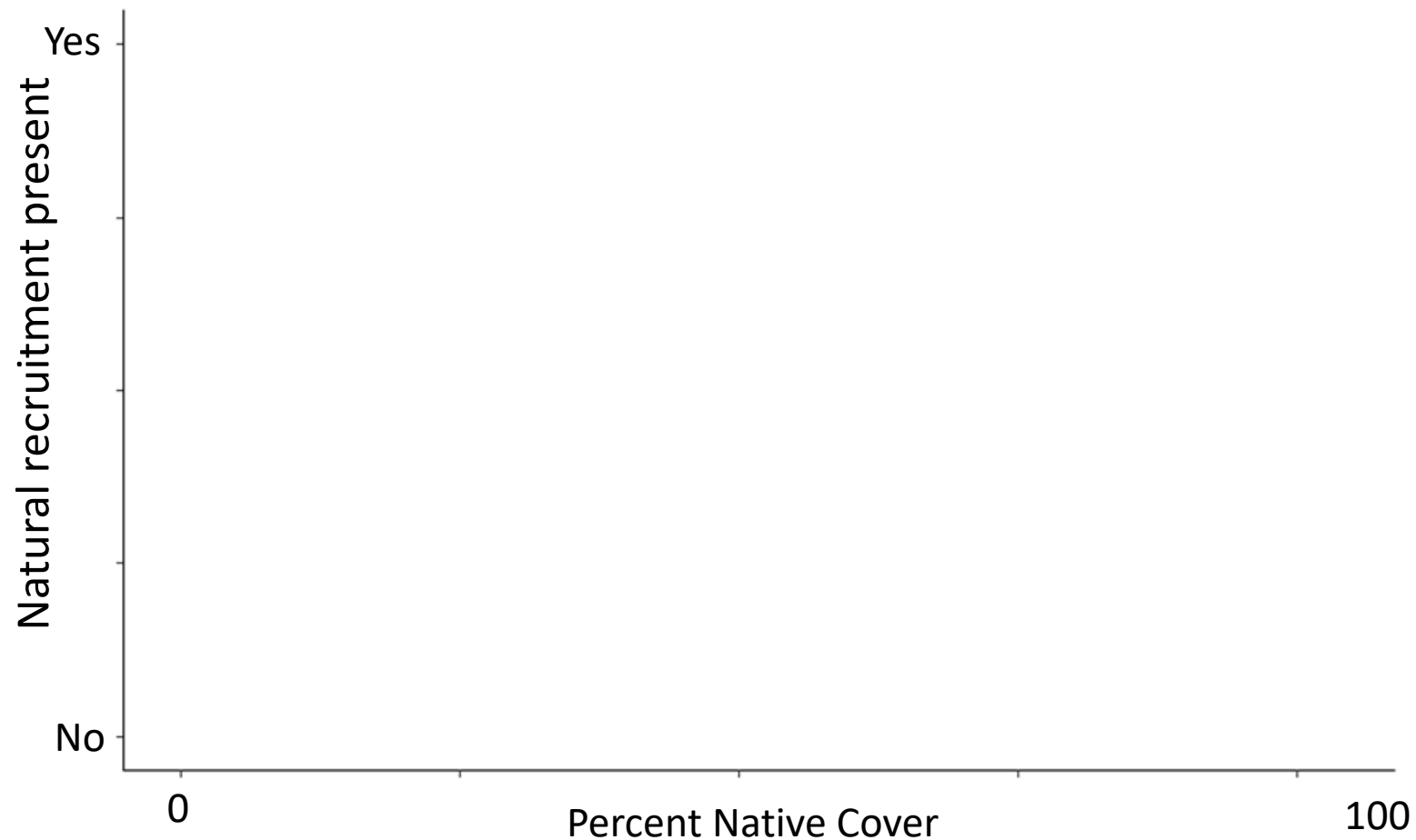
Native cover  
suppresses  
non-native  
cover

Generalized linear model  
gamma



Natural  
recruitment  
occurs with  
higher native  
cover

Generalized linear model  
binomial







Look at my  
Pretty  
Plants





# Understanding Biotic



ity facilitate the

density

natural

ed by native

ve cover